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L1: Entry 1 of 1

File: USPT

Feb 25, 2003

US-PAT-NO: 6524819DOCUMENT-IDENTIFIER: US 6524819 B1

TITLE: Down syndrome critical region 1-like proteins

DATE-ISSUED: February 25, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
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Tingley; Debora W.	San Francisco	CA		
Edwards; Carla M.	Half Moon Bay	CA		
Streeter; David G.	Boulder Creek	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
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APPL-NO: 09/ 614474 [PALM]

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FIELD-OF-SEARCH: 536/23.1, 435/69.1, 435/320.1, 435/252.3, 435/7.1, 435/5, 435/6, 530/300, 530/350

PRIOR-ART-DISCLOSED:

OTHER PUBLICATIONS

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Strittmatter, W.J. et al., "Apolipoprotein E: High-avidity binding to .beta.-amyloid and increased frequency of type 4 allele in late-onset familial Alzheimer disease", *Proc. Natl. Acad. Sci.*, 90:1977-1981 (1993).

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Miyazaki, T. et al., "Molecular Cloning of a Novel Thyroid Hormone-responsive Gene, ZAKI-4, in Human Skin Fibroblasts", *J. Biol. Chem.*, 271:14567-14571 (1996).

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Strippoli, P. et al., "A New Gene Family Including DSCR1 (Down Syndrome Candidate Region 1) and ZAKI-4: Characterization from Yeast to Human and Identification of DSCR1-like 2, a Novel Human Member (DSCR1L2)", *Genomics*, 64:252-263 (2000).

Sutherland, M.K. et al., "Reduction of Thyroid Hormone Receptor c-ERB A.alpha.mRNA Levels in the Hippocampus of Alzheimer as Compared to Huntington Brain", *Neurobiol.*

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Strippoli et al., (Direct Submission) NCBI Accession No. AAF01684 (GI 6017919), Apr. 20, 2000.

ART-UNIT: 1647

PRIMARY-EXAMINER: Kunz; Gary

ASSISTANT-EXAMINER: Turner; Sharon

ATTY-AGENT-FIRM: Incyte Genomics, Inc.

ABSTRACT:

The invention provides a mammalian nucleic acid molecule and fragments thereof. It also provides for the use of the mammalian nucleic acid molecule for the characterization, diagnosis, evaluation, treatment, of conditions, diseases and disorders associated with gene expression and for the production of a model system. The invention additionally provides expression vectors and host cells for the production of the protein encoded by the mammalian nucleic acid molecule.

13 Claims, 2 Drawing figures

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US-CL-CURRENT: 435/69.1; 435/252.3, 435/320.1, 435/6, 435/7.1, 536/23.1

CLAIMS:

What is claimed is:

1. An isolated nucleic acid molecule comprising a polynucleotide having the nucleic acid sequence of SEQ ID NO:1 or the complement of SEQ ID NO:1.
2. A composition comprising the nucleic acid molecule or the complement of the nucleic acid molecule of claim 1.
3. A substrate comprising the nucleic acid molecule or the complement of the nucleic acid molecule of claim 1.
4. A probe comprising nucleotide 1 to nucleotide 400 of SEQ ID NO:1 or the complement of nucleotide 1 to nucleotide 400 of SEQ ID NO:1.
5. A vector comprising the nucleic acid molecule of claim 1.
6. A host cell comprising the vector of claim 5.
7. A method for producing a protein, the method comprising: a) culturing the host cell of claim 6 under conditions for protein expression; and b) recovering the protein from the host cell culture.
8. A transgenic cell line or organism comprising the vector of claim 5.
9. A method for detecting differential expression of a nucleic acid molecule in a sample containing nucleic acid comprising: a) hybridizing the nucleic acid molecule of claim 2 to nucleic acids in the sample, thereby forming hybridization complexes; and b) comparing the hybridization complexes with standards, wherein the comparison indicates the presence of differential expression of the nucleic acid molecule in the sample.
10. The method of claim 9 further comprising amplifying the nucleic acids of the sample prior to hybridization.

11. The method of claim 9 wherein decreased expression of the nucleic acid molecule of claim 2 is diagnostic of Alzheimer's disease.

12. A method of using a nucleic acid molecule to screen a plurality of molecules or compounds, the method comprising: a) combining the nucleic acid molecule of claim 1 with a plurality of molecules or compounds under conditions to allow specific binding; and b) detecting specific binding, thereby identifying a molecule or compound which specifically binds the nucleic acid molecule.

13. The method of claim 12 wherein the molecules or compounds are selected from DNA molecules, RNA molecules, peptide nucleic acids, artificial chromosome constructions, peptides, transcription factors, repressor, and regulatory molecules.